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## PATENT ABSTRACTS OF JAPAN

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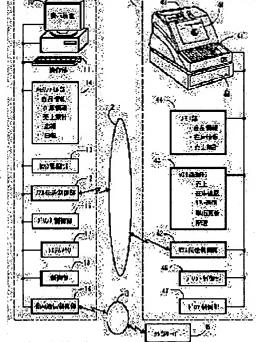
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# (54) DATA TRANSMISSION SYSTEM BETWEEN STORES AND HEADQUARTER

#### (57)Abstract:

PROBLEM TO BE SOLVED: To provide a data transmission system between stores and a headquarter for realizing task processing by connecting a headquarter server through a communication line with plural stores POS devices without any store server. SOLUTION: This system is constituted of a POS terminal equipment 4 having an operating part 41, a task processing part 43 for operating sales processing, a stock confirmation processing, and input data transmission processing or the like, memory part 44 for storing commodity information, stock information, and sales total data or the like, and real transmission control part 42 or the like. Also, this system is constituted of a real communication line 2 and a headquarter server 1



having a real transmission control part 12 for controlling the transmission and reception of the sales total data or the like, task managing part 13 for operating sales management, inventry control, and prompt report data generation or the like, memory file part 14 for storing the commodity information, inventry information, and sales total data or the like, and private communication control part 16 for transmitting and receiving related data through a private communication line 3 with an outside server 5 in the private headquarter.

#### **LEGAL STATUS**

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#### PRIOR ART

[Description of the Prior Art] Conventionally, communication link connection of two or more POS terminals is made by inside-of-a-shop communication lines, such as a store server and LAN, for every store, and tasking, such as sales total processing, delivery processing, and daily report generation, is performed for every store. Communication link connection of two or more store servers is made with the headquarters server via the public line etc. The headquarters server is collecting news flash data, daily report data, ordering data, etc. from each store server by batch processing. For this reason, in headquarters, easily, the sales situation of real time etc. is not acquired, and unless it is after a store server side totals a daily report etc., it cannot be created. There are problems, like operation processings of real time, such as managing delivery of the goods from headquarters etc. by batch processing, cannot be performed easily. A cost factor, like there is the need of furthermore placing the manager of a store server for every store is also technical-problem \*\*\*\*. As a reason a headquarters server cannot control a POS terminal by direct real time, the limitation of the multitask-operation capacity of a headquarters server was also one of the causes. Recently, the capacity of OS (Operating System) to use for a server is also improving by leaps and bounds, and the proposal of the store / data transmission system between headquarters with which a headquarters server unifies each POS terminal directly is wished without the store server small-scale system \*\*.

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#### **TECHNICAL FIELD**

[Field of the Invention] It is concerned with the store / data transmission system between headquarters constituted from a headquarters server by which communication link connection is made via the POS terminal and communication line which were installed in two or more stores, and is involved in the store / data transmission system between headquarters which does not use a store server especially for a store side.

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#### **DETAILED DESCRIPTION**

#### [Detailed Description of the Invention]

[0001]

[Field of the Invention] It is concerned with the store / data transmission system between headquarters constituted from a headquarters server by which communication link connection is made via the POS terminal and communication line which were installed in two or more stores, and is involved in the store / data transmission system between headquarters which does not use a store server especially for a store side.

[0002]

[Description of the Prior Art] Conventionally, communication link connection of two or more POS terminals is made by inside-of-a-shop communication lines, such as a store server and LAN, for every store, and tasking, such as sales total processing, delivery processing, and daily report generation, is performed for every store. Communication link connection of two or more store servers is made with the headquarters server via the public line etc. The headquarters server is collecting news flash data, daily report data, ordering data, etc. from each store server by batch processing. For this reason, in headquarters, easily, the sales situation of real time etc. is not acquired, and unless it is after a store server side totals a daily report etc., it cannot be created. There are problems, like operation processings of real time, such as managing delivery of the goods from headquarters etc. by batch processing, cannot be performed easily. A cost factor, like there is the need of furthermore placing the manager of a store server for every store is also technical-problem \*\*\*\*. As a reason a headquarters server cannot control a POS terminal by direct real time, the limitation of the multitask-operation capacity of a headquarters server was also one of the causes. Recently, the capacity of OS (Operating System) to use for a server is also improving by leaps and bounds, and the proposal of the store / data transmission system between headquarters with which a headquarters server unifies each POS terminal directly is wished without the store server small-scale system \*\*.

[0003]

[Problem(s) to be Solved by the Invention] This invention aims without a store server at the proposal of the store / data transmission system between headquarters which can carry out tasking of a headquarters server and two or more store POS equipments on an epilogue and real time in a communication line in view of the trouble and the technical problem that it explained above. [0004]

[Means for Solving the Problem] In the store / data transmission system between headquarters which receives by the headquarters server which installed real data, such as sales data, in headquarters, and performs creation of sales total data news flash etc. from two or more POS terminals arranged in each store The control unit which inputs sales items, quantity, etc., and the tasking section which performs sales processing, inventory check processing, transmitting processing of input data, etc. based on the input data from a control unit, The memory section which has memorized goods information required for the processing concerned, inventory information, sales total data, etc., The POS terminal which has the real transmission control section which transmits sales total data etc. to a headquarters server, The

real communication line which makes communication link connection of a POS terminal and the headquarters server on-line, The real transmission control section which performs transmit/receive control, such as sales total data from a POS terminal, via a real communication line, The task management section which performs generation of sales management, stock control, and news flash data etc. based on these sales total data that the real transmission control section received, It constitutes from a headquarters server which has the memory file section which consists of multiple files which have memorized goods information, inventory information, sales total data, etc., and the external server of the premises of headquarters etc. and the intercommunication control section which send and receive associated data via a intercommunication circuit.

[0005] Furthermore, the control unit of the keyboard format which carries out the actuation input of the POS terminal for sales data etc., or a touch panel format, The actuation display which displays the data by which the actuation input was carried out, A total, amount-of-money computation, etc. of sales goods The inventory check of the sales processing section and sales goods to perform The tasking section which has the real transmitting processing section which performs transmitting processing of the sales total data of applicable dealings promptly after the inventory check processing section to perform, the unit price update process section which updates the unit price data of goods based on the newest data, and this sales processing section end total processing. The real transmission control section which makes communication link connection with said headquarters server via a real communication line, the goods information memory which has memorized goods information, such as items of goods, a lot number, and a unit price, and an inventory check -- with the memory section which has the sales total memory which makes the inventory information memory and the sales total data for every dealings which have memorized the inventory information on required goods memorize It constitutes from the printer which publishes a receipt etc., a print control section which performs printing control of this printer, a drawer which keeps cash etc., and a drawer control section which performs closing motion control of this drawer.

[0006] Furthermore, additional installation of the delivery processing section which performs delivery arrangement of sales goods etc. in the tasking section is carried out.

[0007] Furthermore, additional installation of the scanner which carries out the reading input of the bar code etc. at a control unit is carried out.

[0008] furthermore, the card reader which reads a customer's credit card data into a control unit and the tasking section -- these credit card data -- being based -- the credit of a card -- additional installation of the card processing section which performs check, sales processing, etc. is carried out.

[0009] Furthermore, additional installation of the communications control section which replaces with a control unit and receives the actuation input data from a handicap terminal to a POS terminal, and the terminal data reception which performs sales processing etc. in the tasking section based on this received actuation input data is carried out.

[0010] Furthermore, additional installation of the customer display which provides a customer with sales dealings information at a display, and the information data generation section which generates goods and the information data about service in the tasking section is carried out.

[0011] Furthermore, make a real communication line into the communication line by infrared means of communications which considers as public communication channels, such as ISDN (Integrated Services of Digital Network) which is set to LAN (Local Area Netowork), and which is set to WAN (Wide Area Netowork), or let it be a communication line by feeble electric-wave means of communications.

[0012] Furthermore, the real transmission control section which transmits and receives a headquarters server for sales total data, inventory check data, etc. via a POS terminal and a real communication line, A display and the control unit which performs the actuation input of tasking, The task management section which has the news flash generation section which totals the sales situation of the delivery Management Department which manages delivery of the price Management Department which manages the inventory department which manages an inventory of the sales Management Department which performs sales management for every dealings based on the received total-on individual option data, and goods, and the price for every goods, and goods etc., and real time, Goods items, a bar code, Goods

information, such as a price The goods information file and merchandise inventory information which have been memorized The merchandise inventory information file and the sales total data for every dealings which have been memorized The memory file section which has the delivery data file which has memorized the delivery data which the news flash file which has memorized the news flash data which the sales total file and this news flash generation section which have been memorized created for every time amount progress, and the delivery Management Department generated, It constitutes from a intercommunication control section which makes communication link connection with an external server via a intercommunication circuit.

[0013] Furthermore, additional installation of the order Management Department which performs order management of the goods with which a stockout is predicted by the task management section, and the order data file which memorizes the order management data which the order Management Department generated in the memory file section is carried out.

[0014] Furthermore, additional installation of the daily report generation section which generates the daily report data which totaled the sales data for every business day in the task management section, and the daily report file which memorizes these daily report data for every business day in the memory file section is carried out.

[0015] Furthermore, additional installation of the period news generation section which generates period news, such as period unit sales data, such as a week unit and a monthly unit, from daily report data in the task management section, and the period news file which memorizes these period news data in the memory file section is carried out.

[0016] Furthermore, additional installation of the information data file which memorizes information data, such as goods introduction inputted into the memory file section from the control unit etc., service introduction, and an event, is carried out.

[0017]

[Embodiment of the Invention] <u>Drawing 1</u> is system configuration drawing of one example of the store / data transmission system between headquarters by this invention. The structure of a system of an example and outline actuation are explained using this Fig. The store / data transmission system between headquarters of an example It is based on the input data from the control unit 41 and control unit 41 which input sales items, quantity, etc. Sales processing, The tasking section 43 which performs inventory check processing, transmitting processing of input data, etc., goods information required for the processing concerned, POS terminal 4 which has the real transmission control section 42 which transmits the memory section 44 which has memorized inventory information, sales total data, etc., sales total data, etc. to the headquarters server 1, The real communication line 2 which makes communication link connection of POS terminal 4 and the headquarters server 1 on-line, It is based on these sales total data that the real transmission control section 12 which performs transmit/receive control, such as sales total data from POS terminal 4, by real communication line 2 course, and the real transmission control section 12 received. The task management section 13, goods information that generation of sales management, stock control, and news flash data etc. is performed, It consists of headquarters servers 1 which have the memory file section 14 which consists of multiple files which have memorized inventory information, sales total data, etc., and the external server 5 grade of the premises of headquarters and the intercommunication control section 16 which send and receive associated data via the intercommunication circuit 3.

[0018] Subsequently, outline actuation is explained. In POS terminal 4, the quantity of sales goods etc. is inputted from the control unit 41 of a keyboard format, and a display output is carried out to the actuation input section 40 for an actuation input. The tasking section 43 performs sales add operation processing, while a name of article, a bar code, a goods unit price, etc. refer to the goods information data beforehand memorized in the memory section 44. An intermediary advances processing to the items which need an inventory check with reference to the inventory information in the memory section 44. After all the inputs of 1 dealings are completed, while a sales total is carried out and a storage input is carried out at the memory section 44, a receipt is published from a printer 49. The tasking section 43 sends out this sales total data to the headquarters server 1 simultaneously via the real transmission

control section 42 and the real communication line 2.

[0019] The real transmission control section 12 of the headquarters server 1 receives these sales total data, and inputs them into the task management section 13. The task management section 13 carries out the addition storage of these sales total data as sales total data for every dealings at the memory file section 14. The real transmission control section 12 of the headquarters server 1 is performing communications control with POS terminal 4 connected to the real communication line 2, and 4' based on the communication protocol means. [ many ] In addition to this, for every fixed time amount, the task management section 13 generates news flash data, such as a sales total of all stores, and carries out addition storage as news flash data at the memory file section 14. Moreover, the daily report data in a business day unit are also generated automatically, and addition storage is carried out as daily report data at the memory file section 14. Furthermore, delivery data are transmitted to the external server 5 which takes charge of delivery processing for delivery processing via the intercommunication control section 16 and the intercommunication circuit 3 a \*\*\*\*\*\* case from POS terminal 4. [0020] It updates at any time, updating storage is carried out at the memory file section 14, and goods information, inventory information, unit price information, etc. are sent to POS terminal 4 by batch processing. Subtraction processing is carried out by the unit sales about inventory information. The multitask operation of these single strings demonstrates the function and engine performance of a practical use region by the activity of multitasking OS. [0021] Drawing 2 is the important section block diagram of one example of the POS terminal by this invention. The configuration and detail actuation of the equipment of an example are explained. Actuation display 40a which displays the control unit 41 of the keyboard format that POS terminal 4 of an example carries out the actuation input of the sales data etc., or a touch panel format, the data by which the actuation input was carried out, A total, amount-of-money computation, etc. of sales goods The inventory check of sales processing section 43a and sales goods to perform The unit price data of inventory check processing section 43b and goods to perform It goes via the tasking section 43 and the real communication line 2 which have real transmitting processing section 43e which performs transmitting processing of the sales total data of applicable sales dealings shortly after unit price update process section 43c and the sales processing section which update based on the newest data end total processing. The real transmission control section 42 which makes communication link connection with the headquarters server 1, the items of goods, a lot number, Goods information, such as a unit price memorized goods information memory 44a and an inventory check -- the printing control of a printer 49 and this printer which publishes the memory section 44 which has sales total memory 44c which makes inventory information memory 44b which has memorized the inventory information on required goods, and the sales total data for every dealings memorize, a receipt, etc. the drawer control section which performs closing motion control of the drawer 48 which keeps the print control section 45 to perform, cash, etc., and this drawer 48 -- 47 -- \*\* -- the basic configuration is carried out. [0022] furthermore, 43d of the delivery processing sections which perform delivery arrangement of sales goods etc. in the tasking section 43 and credit card data -- being based -- the credit of a card -- the additional installation of 43 g of the terminal data reception sections which perform sales processing etc. based on the actuation input data from the received handicap terminal 6 43f of the card processing sections which perform check, sales processing, etc., and 43h of the information data generation sections generate goods and the information data about service is carried out. Furthermore, additional installation of the card reader 41a which reads into a control unit scanner 41b which carries out the reading input of the bar code etc., and a customer's credit card data is carried out. Furthermore, additional installation of the customer display 40b which provides a customer with sales dealings information at the communications control section 46 which replaces with a control unit and receives the actuation input data from the handicap terminal 6 to POS terminal 4, and a display is carried out. [0023] Detail actuation of POS terminal 4 is explained. The actuation input of the sales data of the goods which a customer purchases is carried out from card reader 41a which reads scanner 41b which reads the bar code data printed by the control unit 41 of the keyboard format of manual operation, and goods, a

customer's credit card data, etc. Sales processing section 43a performs sales computation with reference

to the items in goods information memory 44a, a bar code, and unit price information based on the sales data by which the actuation input was carried out. Parallel representation of actuation input data and the count progress data is carried out to actuation display 40a and customer display 40b. When it is the goods which need an inventory check, inventory check processing section 43b checks the inventory information in inventory information memory 44b, and carries out the display output of the result. If the input of all sales data finishes and a sum total input accomplishes, sales processing section 43a performs a sales total, carries out the display output of the sales total data, it will carry out addition storage for every dealings at sales total memory 44c while it acquires a check of a customer and makes it decide, and will publish a receipt from a printer 49. Real transmitting processing section 43e carries out the transmitting output of these sales total data via the real transmission control section 42 promptly at a real communication line.

[0024] If a KUREJIITTO card input occurs, 43f of card processing sections will refer for a credit to a credit card surety company through headquarters server 1 course or the external communication line which is not illustrated. Sales data, such as dining-out service, is inputted using the handicap terminal 6 with which an official in charge has wireless means of communications. The communications control section 46 receives sales data using a feeble electric-wave means or infrared means of communications, and 43g of terminal data reception sections uses these received data as actuation input data, and it carries out a conversion output.

[0025] If a request of delivery is received from a customer, address-for-delivery data will be inputted from the address-for-delivery input section which is not illustrated. 43d of delivery processing sections receives delivery, they add address-for-delivery data to delivery goods data, and carry out a transmitting output via the real transmission control section 42 at a real communication line. Unit price update process section 43c will update the applicable data in goods information memory 44a and inventory information memory 44b, if the updating data of goods information and inventory information are received by BADGE processing from the headquarters server 1. 43h of information data generation sections carries out a storage input at the memory for indicative datas which is not illustrated while generating the information data for display outputs and carrying out a display output to customer display 40b, if information data, such as goods introduction, service introduction, and event introduction, are received from a headquarters server.

[0026] Drawing 3 is the important section block diagram of one example of the headquarters server by this invention. The configuration and detail actuation of a headquarters server are explained using this Fig. The headquarters server 1 of an example sales total data, inventory check data, etc. An inventory of many POS terminals 4, the real transmission control section 12 which are transmitted and received by 4' and real communication line 2 course, an indicating equipment 10, the control unit 11 which performs the actuation input of tasking, sales Management Department which perform sales management for every dealings based on received total-on individual option data 13a, and goods The task management section 13 which has 13f of news flash generation sections which total the sales situation of 13d of delivery Management Department which manages delivery of inventory department 13b to manage, the price Management Department which manages the price for every goods, and goods etc., and real time, goods items, A bar code, Goods information, such as a price Goods information file 14a and merchandise inventory information which have been memorized The delivery data which news flash file 14d which has memorized the news flash data which sales total file 14c and 13f of these news flash generation sections which have memorized merchandise inventory information file 14b and the sales total data for every dealings which have been memorized created for every time amount progress, and 13d of delivery Management Department generated Printer 15a which carries out the printed output of the various data of the memory file section 14 which has memorized delivery data file 14f, the intercommunication control section 16 which makes communication link connection with the external server 5 via the intercommunication circuit 3, and the memory file section 14, The basic configuration is carried out by the printer control section 15 which performs print control of printer 15a. [0027] Furthermore, additional installation of order Management Department 13e which performs order management of the goods with which a stockout is predicted in the task management section 13, 13g of

daily report generation sections which generate the daily report data which totaled the sales data for every business day, the 13h of the period news generation sections which generate period news, such as period unit sales data, such as a week unit and a monthly unit, from daily report data, etc. is carried out. Moreover, additional installation of the information data file 14h memorized in information data, such as goods introduction inputted into the memory file section from daily report file 14e which memorizes order data file 14f which memorizes the order management data which order Management Department 13e generated, and daily report data for every business day, the period news file (not shown) which memorizes these period news data, the control unit, etc., service introduction, and an event, is carried out.

[0028] The real transmission control section 12 performs communications control of time sharing with POS terminal 4 connected to the real communication line 2, and 4' based on a communication protocol means. [many] For this reason, the real communication line 2 needs to secure a high-speed channel, when it is broader-based store expansion, high-speed public communication channels, such as the high speeds LAN and WAN of optical transmission or ISDN, etc. are used, and when it is in the same facility, the communication line by infrared means of communications or the communication line by feeble electric-wave means of communications is adopted for the cutback of construction costs, the degree of freedom of arrangement of a POS terminal, or reservation.

[0029] When data are received for the sales total data from POS terminal 4, 4', etc. by real transmission control section 12 course, sales Management Department 13a makes sales total file 14c carry out the addition storage of these sales total data with time-of-day data for every trading unit. Inventory department 13b carries out renewal of subtraction of the inventory data of sales \*\*\*\*\* at an inventory information file. Moreover, the renewal data of an inventory are sent out to all POS terminals via the real transmission control section 12 in scheduled time.

[0030] 13d of delivery Management Department transmits delivery data to the external server 5 which takes charge of delivery processing for delivery processing from POS terminal 4, 4', etc. by real transmission control section 12 course via the intercommunication circuits 3, such as \*\*\*\*\*\*, and the intercommunication control section 16, LAN.

[0031] For every fixed time amount, 13h of news flash generation sections generates news flash data, such as a sales total of all stores, and they carry out addition storage as news flash data at news flash file 14d. Moreover, 13g of daily report generation sections generates automatically the daily report data in a business day unit, and they carry out addition storage at daily report file 14e. 13h of period news generation sections creates the sales total data of the operating period (week, season, degree of moon, term, fiscal year) unit specified beforehand based on the data of daily report data file 14e, and while carrying out a printed output from printer 15a, data output of them is carried out to a management control server (not shown) etc. via the intercommunication circuit 3.

[0032] Price Management Department 13c sends out the renewal data of a price to all POS terminals 4 and 4' via the real transmission control section 12 in scheduled time while updating the goods information and price information in goods information file 14a based on the goods price data inputted from the control unit 11, or the goods price data from the external server 5 which received by the intercommunication control-section 16 course.

[0033] Order Management Department 13e carries out the prediction check of whether inventory information file 14b inventory data reach the minimum stock level beforehand set up for every item in scheduled time with reference to sales data. The status of order is given to inventory data when a stockout is predicted. The printed output of an order cut-form and the order list is carried out by an official's in charge order confirmation operation from printer 15a, or data output of these order status data is carried out to an order management server (not shown) etc. via the intercommunication circuit 3. [0034] An actuation input is carried out from a control unit 11, or a reception input is carried out from the intercommunication control section 16, and the storage input of the information data, such as goods introduction, service introduction, and event introduction, is carried out at information data file 14h. This information data is sent out to all POS terminals 4 and 4' in scheduled time via the real communication line 2 by the information data transmitting section which is not illustrated.

[0035]

[Effect of the Invention] This invention is carried out from the content explained above, and does so the effectiveness described below. When a POS terminal transmits sales total data etc. to a headquarters server via a real communication line shortly after the sales dealings with a customer are materialized, and this headquarters server carries out the total storage of these received sales total data at the applicable file of the memory file section, a headquarters server can do things, if the sales total data of many POS terminals are collected on real time. Furthermore, the proposal of the store / data transmission system between headquarters which can perform multitask operations, such as sales total data control, news flash management, delivery management, and stock control, was completed, without using a store server.

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#### EFFECT OF THE INVENTION

[Effect of the Invention] This invention is carried out from the content explained above, and does so the effectiveness described below. When a POS terminal transmits sales total data etc. to a headquarters server via a real communication line shortly after the sales dealings with a customer are materialized, and this headquarters server carries out the total storage of these received sales total data at the applicable file of the memory file section, a headquarters server can do things, if the sales total data of many POS terminals are collected on real time. Furthermore, the proposal of the store / data transmission system between headquarters which can perform multitask operations, such as sales total data control, news flash management, delivery management, and stock control, was completed, without using a store server.

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#### TECHNICAL PROBLEM

[Problem(s) to be Solved by the Invention] This invention aims without a store server at the proposal of the store / data transmission system between headquarters which can carry out tasking of a headquarters server and two or more store POS equipments on an epilogue and real time in a communication line in view of the trouble and the technical problem that it explained above.

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#### **MEANS**

[Means for Solving the Problem] In the store / data transmission system between headquarters which receives by the headquarters server which installed real data, such as sales data, in headquarters, and performs creation of sales total data news flash etc. from two or more POS terminals arranged in each store The control unit which inputs sales items, quantity, etc., and the tasking section which performs sales processing, inventory check processing, transmitting processing of input data, etc. based on the input data from a control unit, The memory section which has memorized goods information required for the processing concerned, inventory information, sales total data, etc., The POS terminal which has the real transmission control section which transmits sales total data etc. to a headquarters server, The real communication line which makes communication link connection of a POS terminal and the headquarters server on-line, The real transmission control section which performs transmit/receive control, such as sales total data from a POS terminal, via a real communication line, The task management section which performs generation of sales management, stock control, and news flash data etc. based on these sales total data that the real transmission control section received, It constitutes from a headquarters server which has the memory file section which consists of multiple files which have memorized goods information, inventory information, sales total data, etc., and the external server of the premises of headquarters etc. and the intercommunication control section which send and receive associated data via a intercommunication circuit.

[0005] Furthermore, the control unit of the keyboard format which carries out the actuation input of the POS terminal for sales data etc., or a touch panel format, The actuation display which displays the data by which the actuation input was carried out, A total, amount-of-money computation, etc. of sales goods The inventory check of the sales processing section and sales goods to perform The tasking section which has the real transmitting processing section which performs transmitting processing of the sales total data of applicable dealings promptly after the inventory check processing section to perform, the unit price update process section which updates the unit price data of goods based on the newest data, and this sales processing section end total processing, The real transmission control section which makes communication link connection with said headquarters server via a real communication line, the goods information memory which has memorized goods information, such as items of goods, a lot number, and a unit price, and an inventory check -- with the memory section which has the sales total memory which makes the inventory information memory and the sales total data for every dealings which have memorized the inventory information on required goods memorize It constitutes from the printer which publishes a receipt etc., a print control section which performs printing control of this printer, a drawer which keeps cash etc., and a drawer control section which performs closing motion control of this drawer.

[0006] Furthermore, additional installation of the delivery processing section which performs delivery arrangement of sales goods etc. in the tasking section is carried out.

[0007] Furthermore, additional installation of the scanner which carries out the reading input of the bar code etc. at a control unit is carried out.

[0008] furthermore, the card reader which reads a customer's credit card data into a control unit and the

tasking section -- these credit card data -- being based -- the credit of a card -- additional installation of the card processing section which performs check, sales processing, etc. is carried out.

[0009] Furthermore, additional installation of the communications control section which replaces with a control unit and receives the actuation input data from a handicap terminal to a POS terminal, and the terminal data reception which performs sales processing etc. in the tasking section based on this received actuation input data is carried out.

[0010] Furthermore, additional installation of the customer display which provides a customer with sales dealings information at a display, and the information data generation section which generates goods and the information data about service in the tasking section is carried out.

[0011] Furthermore, make a real communication line into the communication line by infrared means of communications which considers as public communication channels, such as ISDN (Integrated Services of Digital Network) which is set to LAN (Local Area Netowork), and which is set to WAN (Wide Area Netowork), or let it be a communication line by feeble electric-wave means of communications. [0012] Furthermore, the real transmission control section which transmits and receives a headquarters server for sales total data, inventory check data, etc. via a POS terminal and a real communication line, A display and the control unit which performs the actuation input of tasking. The task management section which has the news flash generation section which totals the sales situation of the delivery Management Department which manages delivery of the price Management Department which manages the inventory department which manages an inventory of the sales Management Department which performs sales management for every dealings based on the received total-on individual option data, and goods, and the price for every goods, and goods etc., and real time, Goods items, a bar code, Goods information, such as a price The goods information file and merchandise inventory information which have been memorized The merchandise inventory information file and the sales total data for every dealings which have been memorized The memory file section which has the delivery data file which has memorized the delivery data which the news flash file which has memorized the news flash data which the sales total file and this news flash generation section which have been memorized created for every time amount progress, and the delivery Management Department generated, It constitutes from a intercommunication control section which makes communication link connection with an external server via a intercommunication circuit.

[0013] Furthermore, additional installation of the order Management Department which performs order management of the goods with which a stockout is predicted by the task management section, and the order data file which memorizes the order management data which the order Management Department generated in the memory file section is carried out.

[0014] Furthermore, additional installation of the daily report generation section which generates the daily report data which totaled the sales data for every business day in the task management section, and the daily report file which memorizes these daily report data for every business day in the memory file section is carried out.

[0015] Furthermore, additional installation of the period news generation section which generates period news, such as period unit sales data, such as a week unit and a monthly unit, from daily report data in the task management section, and the period news file which memorizes these period news data in the memory file section is carried out.

[0016] Furthermore, additional installation of the information data file which memorizes information data, such as goods introduction inputted into the memory file section from the control unit etc., service introduction, and an event, is carried out.

[0017]

[Embodiment of the Invention] <u>Drawing 1</u> is system configuration drawing of one example of the store / data transmission system between headquarters by this invention. The structure of a system of an example and outline actuation are explained using this Fig. The store / data transmission system between headquarters of an example It is based on the input data from the control unit 41 and control unit 41 which input sales items, quantity, etc. Sales processing, The tasking section 43 which performs inventory check processing, transmitting processing of input data, etc., goods information required for

the processing concerned, POS terminal 4 which has the real transmission control section 42 which transmits the memory section 44 which has memorized inventory information, sales total data, etc., sales total data, etc. to the headquarters server 1, The real communication line 2 which makes communication link connection of POS terminal 4 and the headquarters server 1 on-line, It is based on these sales total data that the real transmission control section 12 which performs transmit/receive control, such as sales total data from POS terminal 4, by real communication line 2 course, and the real transmission control section 12 received. The task management section 13, goods information that generation of sales management, stock control, and news flash data etc. is performed, It consists of headquarters servers 1 which have the memory file section 14 which consists of multiple files which have memorized inventory information, sales total data, etc., and the external server 5 grade of the premises of headquarters and the intercommunication control section 16 which send and receive associated data via the intercommunication circuit 3.

[0018] Subsequently, outline actuation is explained. In POS terminal 4, the quantity of sales goods etc. is inputted from the control unit 41 of a keyboard format, and a display output is carried out to the actuation input section 40 for an actuation input. The tasking section 43 performs sales add operation processing, while a name of article, a bar code, a goods unit price, etc. refer to the goods information data beforehand memorized in the memory section 44. An intermediary advances processing to the items which need an inventory check with reference to the inventory information in the memory section 44. After all the inputs of 1 dealings are completed, while a sales total is carried out and a storage input is carried out at the memory section 44, a receipt is published from a printer 49. The tasking section 43 sends out this sales total data to the headquarters server 1 simultaneously via the real transmission control section 42 and the real communication line 2.

[0019] The real transmission control section 12 of the headquarters server 1 receives these sales total data, and inputs them into the task management section 13. The task management section 13 carries out the addition storage of these sales total data as sales total data for every dealings at the memory file section 14. The real transmission control section 12 of the headquarters server 1 is performing communications control with POS terminal 4 connected to the real communication line 2, and 4' based on the communication protocol means. [ many ] In addition to this, for every fixed time amount, the task management section 13 generates news flash data, such as a sales total of all stores, and carries out addition storage as news flash data at the memory file section 14. Moreover, the daily report data in a business day unit are also generated automatically, and addition storage is carried out as daily report data at the memory file section 14. Furthermore, delivery data are transmitted to the external server 5 which takes charge of delivery processing for delivery processing via the intercommunication control section 16 and the intercommunication circuit 3 a \*\*\*\*\*\* case from POS terminal 4.

[0020] It updates at any time, updating storage is carried out at the memory file section 14, and goods information, inventory information, unit price information, etc. are sent to POS terminal 4 by batch processing. Subtraction processing is carried out by the unit sales about inventory information. The multitask operation of these single strings demonstrates the function and engine performance of a practical use region by the activity of multitasking OS.

[0021] Drawing 2 is the important section block diagram of one example of the POS terminal by this invention. The configuration and detail actuation of the equipment of an example are explained. Actuation display 40a which displays the control unit 41 of the keyboard format that POS terminal 4 of an example carries out the actuation input of the sales data etc., or a touch panel format, the data by which the actuation input was carried out, A total, amount-of-money computation, etc. of sales goods The inventory check of sales processing section 43a and sales goods to perform The unit price data of inventory check processing section 43b and goods to perform It goes via the tasking section 43 and the real communication line 2 which have real transmitting processing section 43e which performs transmitting processing of the sales total data of applicable sales dealings shortly after unit price update process section 43c and the sales processing section which update based on the newest data end total processing. The real transmission control section 42 which makes communication link connection with the headquarters server 1, the items of goods, a lot number, Goods information, such as a unit price

memorized goods information memory 44a and an inventory check -- the printing control of a printer 49 and this printer which publishes the memory section 44 which has sales total memory 44c which makes inventory information memory 44b which has memorized the inventory information on required goods, and the sales total data for every dealings memorize, a receipt, etc. the drawer control section which performs closing motion control of the drawer 48 which keeps the print control section 45 to perform, cash, etc., and this drawer 48 -- 47 -- \*\* -- the basic configuration is carried out.

[0022] furthermore, 43d of the delivery processing sections which perform delivery arrangement of sales goods etc. in the tasking section 43 and credit card data -- being based -- the credit of a card -- the additional installation of 43 g of the terminal data reception sections which perform sales processing etc. based on the actuation input data from the received handicap terminal 6 43f of the card processing sections which perform check, sales processing, etc., and 43h of the information data generation sections generate goods and the information data about service is carried out. Furthermore, additional installation of the card reader 41a which reads into a control unit scanner 41b which carries out the reading input of the bar code etc., and a customer's credit card data is carried out. Furthermore, additional installation of the customer display 40b which provides a customer with sales dealings information at the communications control section 46 which replaces with a control unit and receives the actuation input data from the handicap terminal 6 to POS terminal 4, and a display is carried out.

[0023] Detail actuation of POS terminal 4 is explained. The actuation input of the sales data of the goods which a customer purchases is carried out from card reader 41a which reads scanner 41b which reads the bar code data printed by the control unit 41 of the keyboard format of manual operation, and goods, a customer's credit card data, etc. Sales processing section 43a performs sales computation with reference to the items in goods information memory 44a, a bar code, and unit price information based on the sales data by which the actuation input was carried out. Parallel representation of actuation input data and the count progress data is carried out to actuation display 40a and customer display 40b. When it is the goods which need an inventory check, inventory check processing section 43b checks the inventory information in inventory information memory 44b, and carries out the display output of the result. If the input of all sales data finishes and a sum total input accomplishes, sales processing section 43a performs a sales total, carries out the display output of the sales total data, it will carry out addition storage for every dealings at sales total memory 44c while it acquires a check of a customer and makes it decide, and will publish a receipt from a printer 49. Real transmitting processing section 43e carries out the transmitting output of these sales total data via the real transmission control section 42 promptly at a real communication line.

[0024] If a KUREJIITTO card input occurs, 43f of card processing sections will refer for a credit to a credit card surety company through headquarters server 1 course or the external communication line which is not illustrated. Sales data, such as dining-out service, is inputted using the handicap terminal 6 with which an official in charge has wireless means of communications. The communications control section 46 receives sales data using a feeble electric-wave means or infrared means of communications, and 43g of terminal data reception sections uses these received data as actuation input data, and it carries out a conversion output.

[0025] If a request of delivery is received from a customer, address-for-delivery data will be inputted from the address-for-delivery input section which is not illustrated. 43d of delivery processing sections receives delivery, they add address-for-delivery data to delivery goods data, and carry out a transmitting output via the real transmission control section 42 at a real communication line. Unit price update process section 43c will update the applicable data in goods information memory 44a and inventory information memory 44b, if the updating data of goods information and inventory information are received by BADGE processing from the headquarters server 1. 43h of information data generation sections carries out a storage input at the memory for indicative datas which is not illustrated while generating the information data for display outputs and carrying out a display output to customer display 40b, if information data, such as goods introduction, service introduction, and event introduction, are received from a headquarters server.

[0026] Drawing 3 is the important section block diagram of one example of the headquarters server by

this invention. The configuration and detail actuation of a headquarters server are explained using this Fig. The headquarters server 1 of an example sales total data, inventory check data, etc. An inventory of many POS terminals 4, the real transmission control section 12 which are transmitted and received by 4' and real communication line 2 course, an indicating equipment 10, the control unit 11 which performs the actuation input of tasking, sales Management Department which perform sales management for every dealings based on received total-on individual option data 13a, and goods The task management section 13 which has 13f of news flash generation sections which total the sales situation of 13d of delivery Management Department which manages delivery of inventory department 13b to manage, the price Management Department which manages the price for every goods, and goods etc., and real time, goods items, A bar code, Goods information, such as a price Goods information file 14a and merchandise inventory information which have been memorized The delivery data which news flash file 14d which has memorized the news flash data which sales total file 14c and 13f of these news flash generation sections which have memorized merchandise inventory information file 14b and the sales total data for every dealings which have been memorized created for every time amount progress, and 13d of delivery Management Department generated Printer 15a which carries out the printed output of the various data of the memory file section 14 which has memorized delivery data file 14f, the intercommunication control section 16 which makes communication link connection with the external server 5 via the intercommunication circuit 3, and the memory file section 14, The basic configuration is carried out by the printer control section 15 which performs print control of printer 15a. [0027] Furthermore, additional installation of order Management Department 13e which performs order management of the goods with which a stockout is predicted in the task management section 13, 13g of daily report generation sections which generate the daily report data which totaled the sales data for every business day, the 13h of the period news generation sections which generate period news, such as period unit sales data, such as a week unit and a monthly unit, from daily report data, etc. is carried out. Moreover, additional installation of the information data file 14h memorized in information data, such as goods introduction inputted into the memory file section from daily report file 14e which memorizes order data file 14f which memorizes the order management data which order Management Department 13e generated, and daily report data for every business day, the period news file (not shown) which memorizes these period news data, the control unit, etc., service introduction, and an event, is carried

[0028] The real transmission control section 12 performs communications control of time sharing with POS terminal 4 connected to the real communication line 2, and 4' based on a communication protocol means. [many] For this reason, the real communication line 2 needs to secure a high-speed channel, when it is broader-based store expansion, high-speed public communication channels, such as the high speeds LAN and WAN of optical transmission or ISDN, etc. are used, and when it is in the same facility, the communication line by infrared means of communications or the communication line by feeble electric-wave means of communications is adopted for the cutback of construction costs, the degree of freedom of arrangement of a POS terminal, or reservation.

[0029] When data are received for the sales total data from POS terminal 4, 4', etc. by real transmission control section 12 course, sales Management Department 13a makes sales total file 14c carry out the addition storage of these sales total data with time-of-day data for every trading unit. Inventory department 13b carries out renewal of subtraction of the inventory data of sales \*\*\*\*\* at an inventory information file. Moreover, the renewal data of an inventory are sent out to all POS terminals via the real transmission control section 12 in scheduled time.

[0030] 13d of delivery Management Department transmits delivery data to the external server 5 which takes charge of delivery processing for delivery processing from POS terminal 4, 4', etc. by real transmission control section 12 course via the intercommunication circuits 3, such as \*\*\*\*\*\*, and the intercommunication control section 16, LAN.

[0031] For every fixed time amount, 13h of news flash generation sections generates news flash data, such as a sales total of all stores, and they carry out addition storage as news flash data at news flash file 14d. Moreover, 13g of daily report generation sections generates automatically the daily report data in a

business day unit, and they carry out addition storage at daily report file 14e. 13h of period news generation sections creates the sales total data of the operating period (week, season, degree of moon, term, fiscal year) unit specified beforehand based on the data of daily report data file 14e, and while carrying out a printed output from printer 15a, data output of them is carried out to a management control server (not shown) etc. via the intercommunication circuit 3.

[0032] Price Management Department 13c sends out the renewal data of a price to all POS terminals 4 and 4' via the real transmission control section 12 in scheduled time while updating the goods information and price information in goods information file 14a based on the goods price data inputted from the control unit 11, or the goods price data from the external server 5 which received by the intercommunication control-section 16 course.

[0033] Order Management Department 13e carries out the prediction check of whether inventory information file 14b inventory data reach the minimum stock level beforehand set up for every item in scheduled time with reference to sales data. The status of order is given to inventory data when a stockout is predicted. The printed output of an order cut-form and the order list is carried out by an official's in charge order confirmation operation from printer 15a, or data output of these order status data is carried out to an order management server (not shown) etc. via the intercommunication circuit 3. [0034] An actuation input is carried out from a control unit 11, or a reception input is carried out from the intercommunication control section 16, and the storage input of the information data, such as goods introduction, service introduction, and event introduction, is carried out at information data file 14h. This information data is sent out to all POS terminals 4 and 4' in scheduled time via the real communication line 2 by the information data transmitting section which is not illustrated.

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#### **DESCRIPTION OF DRAWINGS**

[Brief Description of the Drawings]

[Drawing 1] It is system configuration drawing of one example of the store / data transmission system between headquarters by this invention.

[Drawing 2] It is the important section block diagram of one example of the POS terminal by this invention.

[Drawing 3] It is the important section block diagram of one example of the headquarters server by this invention.

[Description of Notations]

- 1 Headquarters Server
- 2 Real Communication Line
- 3 Intercommunication Circuit
- 4 POS Terminal
- 5 External Server
- 6 Handicap Terminal
- 10 Display
- 11 41 Control unit
- 12 42 Real transmission control section
- 13 Task Management Section
- 13a Sales Management Department
- 13b Inventory department
- 13c Price Management Department
- 13d Delivery Management Department
- 13e Order Management Department
- 13f News flash generation section
- 13g Daily report generation section
- 13h Period news generation section
- 14 Memory File Section
- 14a Goods information file
- 14b Inventory information file
- 14c Sales total file
- 14d News flash file
- 14e Daily report file
- 14f Delivery data file
- 14g Order data file
- 14h Information data file
- 15 Printer Control Section
- 15a, 49 Printer
- 16 Intercommunication Control Section

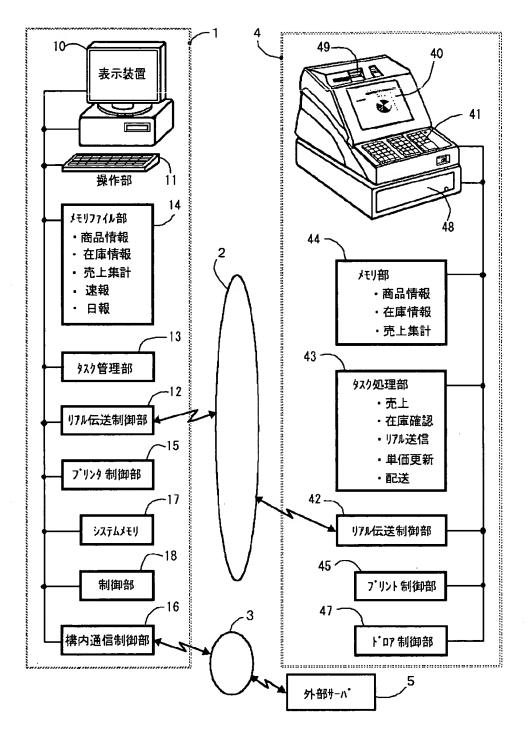
- 40 Display
- 40a Actuation display
- 40b Customer display
- 41a Card reader
- 41b Scanner
- 43 Tasking Section
- 43a Sales processing section
- 43b Inventory check processing section
- 43c Unit price update process section
- 43d Delivery processing section
- 43e Real transmitting processing section
- 43f Card processing section
- 43g Terminal data reception section
- 43h Information data generation section
- 44 Memory Section
- 44a Goods information memory
- 44b Inventory information memory
- 44c Sales total memory
- 45 Print Control Section
- 46 Communications Control Section
- 47 Drawer Control Section
- 48 Drawer

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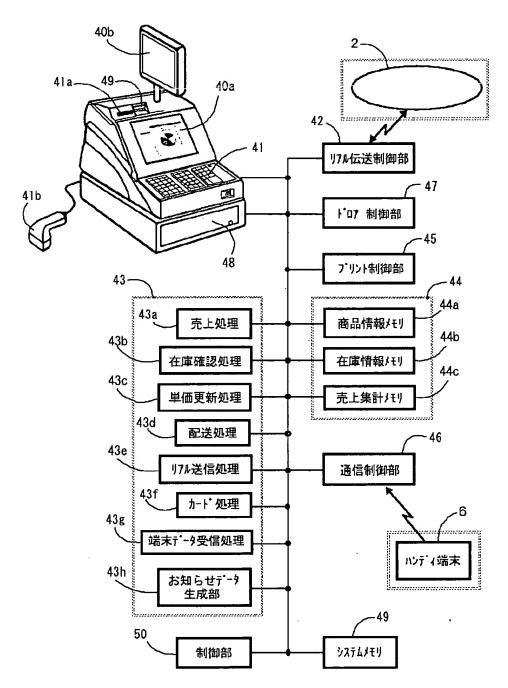
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#### **DRAWINGS**

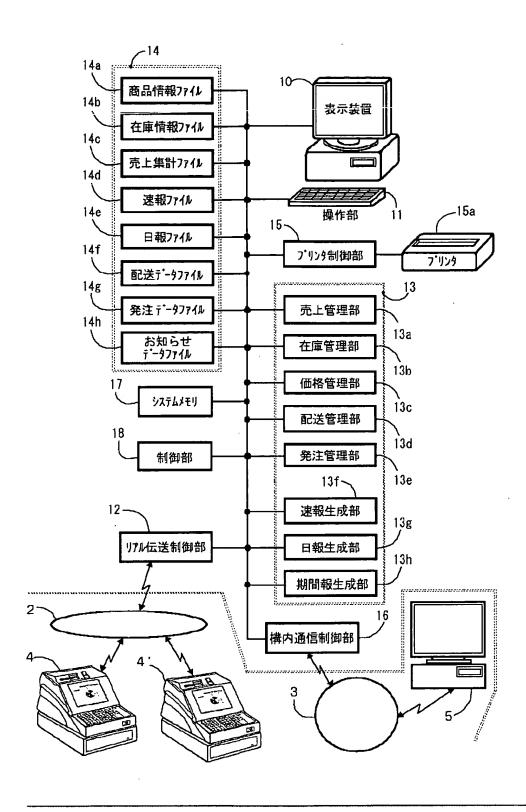
[Drawing 1]



[Drawing 2]



[Drawing 3]



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#### **CLAIMS**

#### [Claim(s)]

[Claim 1] In the store / data transmission system between headquarters which receives by the headquarters server which installed real data, such as sales data, in headquarters, and performs creation of sales total data news flash etc. from two or more POS terminals arranged in each store The control unit which inputs sales items, quantity, etc., and the tasking section which performs sales processing, inventory check processing, transmitting processing of input data, etc. based on the input data from said control unit, The memory section which has memorized goods information required for said processing concerned, inventory information, sales total data, etc., Said POS terminal which has the real transmission control section which transmits said sales total data etc. to a headquarters server. The real communication line which makes communication link connection of said POS terminal and said headquarters server on-line, Said real transmission control section which performs transmit/receive control, such as sales total data from said POS terminal, via a real communication line, The task management section which performs generation of sales management, stock control, and news flash data etc. based on these sales total data that said real transmission control section received. The memory file section which consists of multiple files which have memorized goods information, inventory information, sales total data, etc., It constitutes from a headquarters server which has the external server of the premises of headquarters, etc. and the intercommunication control section which send and receive associated data via a intercommunication circuit. Said POS terminal Shortly after the sales dealings with a customer are materialized, these sales total data etc. are transmitted to said headquarters server via said real communication line. This headquarters server is the store / data transmission system between headquarters characterized by carrying out the total storage of these received sales total data at the applicable file of said memory file section.

[Claim 2] The control unit of the keyboard format which carries out the actuation input of said POS terminal for sales data etc., or a touch panel format, The actuation display which displays the data by which the actuation input was carried out, A total, amount-of-money computation, etc. of sales goods The inventory check of the sales processing section and sales goods to perform The tasking section which has the real transmitting processing section which performs transmitting processing of the sales total data of applicable dealings promptly after the inventory check processing section to perform, the unit price update process section which updates the unit price data of goods based on the newest data, and said sales processing section end total processing, The real transmission control section which makes communication link connection with said headquarters server via said real communication line, The memory section which has the sales total memory which makes the inventory information memory and the sales total data for every dealings which have memorized the inventory information on goods required for the goods information memory and the inventory check which have memorized goods information, such as items of goods, a lot number, and a unit price, memorize, The printer which publishes a receipt etc., and the print control section which performs printing control of this printer, It constitutes from a drawer which keeps cash etc., and a drawer control section which performs closing motion control of this drawer. Said real transmitting processing section The store according to claim 1 / data transmission system between headquarters characterized by carrying out sending-out processing of these sales total data via said real transmission control section shortly after said sales processing section ends total processing and carrying out the storage input of the sales total data for every dealings at said sales total memory.

[Claim 3] The store according to claim 2 / data transmission system between headquarters which carries out additional installation of the delivery processing section which performs delivery arrangement of sales goods etc. in said tasking section, and is characterized by carrying out sending-out processing of goods information required for delivery, the customer information, etc. at a headquarters server. [Claim 4] The store according to claim 2 / data transmission system between headquarters which carries out additional installation of the scanner which carries out the reading input of the bar code etc., and is characterized by considering a bar code or a bar code printed to goods as a read actuation input at said control unit.

[Claim 5] the card reader which reads a customer's credit card data into said control unit, and said tasking section -- these credit card data -- being based -- the credit of a card -- carrying out additional installation of the card processing section which performs check, sales processing, etc., and enabling dealings with the credit card which a customer owns -- a store according to claim 2 / data transmission system between headquarters.

[Claim 6] They are a store according to claim 2 / data transmission system between headquarters about carrying out additional installation of the communications control section which replaces with said control unit and receives the actuation input data from a handicap terminal to said POS terminal, and the terminal data reception which performs sales processing etc. in said tasking section based on this received actuation input data, and enabling a sales data input with said handicap terminal.

[Claim 7] They are a store according to claim 2 / data transmission system between headquarters about carrying out additional installation of the customer display which provides a customer with sales dealings information at said display, and the information data generation section which generates goods and the information data about service in said tasking section, and enabling offer of the information about goods or service at a customer using said customer display.

[Claim 8] The store according to claim 1 / data transmission system between headquarters characterized by setting said real communication line to LAN (Local Area Netowork).

[Claim 9] The store according to claim 1 / data transmission system between headquarters characterized by setting said real communication line to WAN (Wide Area Netowork).

[Claim 10] The store according to claim 1 / data transmission system between headquarters characterized by making said real communication line into public communication channels, such as ISDN (Integrated Servicesof Digital Network).

[Claim 11] The store according to claim 1 / data transmission system between headquarters characterized by making said real communication line into the communication line by infrared means of communications.

[Claim 12] The store according to claim 1 / data transmission system between headquarters characterized by making said real communication line into the communication line by feeble electric-wave means of communications.

[Claim 13] The real transmission control section which transmits and receives said headquarters server for said sales total data, inventory check data, etc. via said POS terminal and said real communication line, A display and the control unit which performs the actuation input of tasking, The task management section which has the news flash generation section which totals the sales situation of the delivery Management Department which manages delivery of the price Management Department which manages the inventory department which manages an inventory of the sales Management Department which performs sales management for every dealings based on the received total-on individual option data, and goods, and the price for every goods, and goods etc., and real time, Goods items, a bar code, Goods information, such as a price The goods information file and merchandise inventory information which have been memorized The merchandise inventory information file and the sales total data for every dealings which have been memorized The memory file section which has the delivery data file which

has memorized the delivery data which the news flash file which has memorized the news flash data which the memorized sales total file and said news flash generation section created for every time amount progress, and said delivery Management Department generated, It constitutes from a intercommunication control section which makes communication link connection with an external server via a intercommunication circuit. Said headquarters server The store according to claim 1 / data transmission system between headquarters which makes communication link connection via said two or more POS terminals and said real communication line, and is characterized by performing multitask operations, such as sales total processing, inventory \*\*\*\*\*\*\*\*, delivery processing, and news flash creation processing, on real time.

[Claim 14] they be the store according to claim 13 / data transmission system between headquarters carry out additional installation of the order Management Department which perform order management of the goods with which a stockout be predict by said task management section, and the order data file which memorize the order management data which said order Management Department generated in said memory file section, and will carry out add the order status to merchandise inventory data as the description if said order Management Department reach to the order conditions to which the merchandise inventory be set beforehand.

[Claim 15] The store according to claim 13 / data transmission system between headquarters characterized by carrying out additional installation of the daily report file which memorizes these daily report data for every business day in the daily report generation section which generates the daily report data which totaled the sales data for every business day in said task management section, and said memory file section.

[Claim 16] The store according to claim 13 / data transmission system between headquarters characterized by carrying out additional installation of the period news file which memorizes these period news data in the period news generation section which generates period news, such as period unit sales data, such as a week unit and a monthly unit, from said daily report data in said task management section, and said memory file section.

[Claim 17] The store according to claim 13 / data transmission system between headquarters characterized by carrying out additional installation of the information data file which memorizes information data, such as goods introduction inputted into said memory file section from said control unit etc., service introduction, and an event, and making it possible to transmit these information data to said POS terminal via a real communication line.

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